80/332/RVC

RESULT OF VOTING ON CDV

Project number: IEC 60936-3 Ed.1	Reference number of the CDV **80/285/CDV**
IEC/TC or SC TC 80	Date of circulation 2001-12-21

Title of the TC or SC concerned
Maritime navigation and radiocommunication equipment and systems

Title of the committee draft:
Maritime navigation and radiocommunication equipment and systems- Radar - Part 3: Radar with chart facilities - Performance requirements - Methods of testing and required test results

The above-mentioned document was distributed to National Committees with a request that voting take place for approval for circulation as an FDIS (or publication as a Technical Specification or Report)

Voting results

see printout attached

Comments received – see annex [1)]

In the case that the approval criteria for acceptance have been met,

a ☒ The committee draft for vote (CDV) will be registered as an FDIS by (date) .2001-12

b ☐ The committee draft for vote (CDV) will be published as a Technical Specification ☐ or Report ☐ by (date) .....

DECISION OF THE CHAIRMAN (in cooperation with the secretariat), in the case that the approval criteria for acceptance have not been met

c ☐ A revised committee draft for vote (CDV) will be distributed by (date) .....

d ☐ A revised committee draft (CD) will be distributed by (date) .....

e ☐ The committee draft for vote (CDV) and comments will be discussed at the next meeting (date) .....

NOTE — In the case of a proposal *c* or *d* made by the chairman, P-members objecting to such a proposal shall inform the Central Office with copy to the secretary in writing within 2 months of the circulation of this compilation (see ISO/IEC Directives, Part 1, 2.6.5).

Name or signature of the Secretary	Name or signature of the Chairman
M. A. Rambaut	Dr A Norris

ANNEX A

Result of Voting on CDV - Document 80/285/CDV

Project: IEC 60936-3 Ed.1
Maritime navigation and radiocommunication equipment and systems - Radar - Part 3: Radar with chart facilities - Performance requirements, methods of test and required test result

Circulation Date: 2001-02-02
Closing Date: 2001-07-06

Country	Status	Sent	Received	Vote	Comments
Belgium	P	2001-05-04	2001-05-04	Y	-
Canada	P	2001-06-27	2001-06-27	A	-
China	P	2001-07-03	2001-07-03	Y	-
Denmark	P	2001-07-06	2001-07-06	A	-
Finland	P	2001-06-13	2001-06-13	Y	Y
France	P	2001-07-05	2001-07-05	N	Y
Germany	P	2001-07-05	2001-07-05	Y	Y
Greece	O	2001-07-03	2001-07-03	A	-
Ireland	O	2001-06-21	2001-06-21	Y	-
Italy	P	2001-07-04	2001-07-04	Y	-
Japan	P	2001-06-26	2001-06-26	Y	Y
Netherlands	P	2001-07-02	2001-07-02	Y	-
Norway	P	2001-07-04	2001-07-04	Y	-
Portugal	-	2001-07-06	2001-07-06	A	-
Russian Fed.	P	2001-07-06	2001-07-06	Y	-
Spain	O	2001-07-03	2001-07-03	Y	-
Sweden	P	2001-07-05	2001-07-05	Y	-
Turkey	P	2001-06-26	2001-06-26	Y	-
U.S.A.	P	2001-07-03	2001-07-03	Y	Y
United Kingdom	P	2001-07-05	2001-07-05	Y	-

		Approval Criteria	Result
P-members voting: 14			
P-members in favour: 13 = 93 %		**>= 67%**	**APPROVED**
Total votes cast: 16	**Total against: 1 = 6 %**	**<= 25%**	**APPROVED**
Final Decision:			**APPROVED**

NOTES

1 Vote: Does the National Committee agree to the circulation of the draft as a FDIS:
Y = In favour; N = Against; A = Abstention.

2 Only votes received before the closing date are counted in determining the decision.
Late Votes: (0).

3 Abstentions are not taken into account when totalizing the votes.

4 P-members not voting: Egypt; Romania; (2).

Annex

Date	Document
2001-12-14	80/285/CDV

National Committee	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
1: France 1			General	French National Committee casts a negative vote on this document because there are numerous ambiguities in this proposal. Additionally there is no specific reference from IMO related to this system.		Not agreed. There is an IMO MSC.64(67) Annex 4 clauses 3.3.9 and 3.3.10 which the IEC standard clarifies. Also 'ambiguities' are not identified.
2: France 2			General	There is no reason why radar with cartographic facilities should exclusively use cartographic data provided by an ECDIS. There is also no reason not to give the possibility to use a radar with cartographic facilities in conjunction with a classical paper chart navigation	It should be first stated that a radar with cartographic facilities permits to use a cartographic database superposed to the radar image, with some specifications concerning this display like in the present text (content, priorities, symbols, …). Then it should be recommended that this database should rely on official data (ENC or possibly SENC if an ECDIS is installed onboard). In order to avoid ambiguities, the radar cartographic database should have a different name than « SENC » which is clearly linked to ECDIS (IEC 61174)	Not agreed This standard clarifies the IMO Performance Standard as noted in 1 above. The IMO Performance Standard specifically references only the SENC.
3: France 3		3.1.2 and Annex C.2	Technical	The cartographic database used by the radar should have a specific name, different from SENC, and used each time wording like « SENC information » or « SENC data » is in the present text.		Not agreed. See above
4: Japan 1	4.1.1		Editorial	(SOLAS ChV Reg.18.5)	Change to (SOLAS Chapter V/Reg.18.5) in consistence with the expression in 4.6.3.	Agreed
5: DE 1	4.2.1		Technical	Due to the base use of a radar for collision avoidance small targets have to be visible on the display, this can not be assured when RCDS are in use. a) RCDS have wide colour range and colour contrast can be insufficient b) due to the fact that every time all chart items are on the chart the picture tends to be too cluttered to identify small targets.	Extend paragraph: ....navigational information. RCDS are not applicable for chart radar.	Agreed in principle Raster nautical charts (RNC) are not applicable for chart radar
6: DE 2	4.3.2		Technical	This function should be usable for the user during operation.	Extend paragraph as follows: ...adjustable by the user during operation.	Agreed in principle. Insert … adjustable by the user at any time.

National Committee	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
7: DE 3	4.4.4	b)	Technical	Primary task of a radar is the collision avoidance. The chart information should help the user to distinct features noted in the chart from other objects – based on this it has to be assured that no small targets are lost due to clutter or covered by chart objects.	Extend paragraph as follows: ...which neither cannot be left in the position of "radar information off" nor " radar information reduced in priority" a limited time out is permitted.	Agreed in principle Delete all of .. b)
8: Japan.2	4.4.6	Title b)	Editorial	Independence of Radar/ARPA, ATA, EPA and SENC	Change to "Independence of Radar image, ARPA, ATA, EPA and SENC"	Agreed
9: DE 4	4.5.1	e)	Technical	The borderline between No-Data and Official-ENC-data is characterised by the borderline for Official-ENC-Cells. Further on S-52 distinct between Official and Non-Official-ENC data. In the chart radar this should be handled analogue. In areas were no data are available a No-Data-Pattern according to S-52 would create a high degree of clutter on the radar and should be avoided.	Extend text as follows: ... borderlines between No-Data, Official-Data and Non-Official-Data the appropriate line styles defined in S-52 shall be used. For areas in which no data are provided the NO-DATA-Pattern according S-52 shall not be used. If Non-Official-Data are used a clear indication shall be given to the user according to S-52.	Agreed in principle. Insert new sentence 'For borderlines . .'
10: US 1	4.7		General	The requirements for interfacing, as currently described in paragraph 4.7, are considered inadequate to ensure interoperability among systems. The proposals described here are consequential to a review of this CDV by WG6, and include their recommendations. Since most of the work required has already been done by WG6, it should be possible to implement the proposals listed below at a single meeting.		Not agreed See answer to 12 below
11: Japan.3	4.7 a)		Editorial	shall be ~~to suitable~~ IEC 61162….	shall be <u>suitable to</u> IEC 61162….	Agreed in principle …shall be to appropriate IEC 61162…
12: US 2	4.7	a	Editorial	Requirement should be related to International Maritime Organization and International Telecommunications Union requirements.	Change text to read: "4.7 Interfacing : a) All relevant interfaces to external sensors and sources, which comply with IMO and ITU Standards and Regulations, shall comply with IEC 61162.	Not agreed The IEC 61162 interfaces for sensor input to the host radar are given in clauses 3.22 and 4.22 of the radar standard. There are no suitable IEC 61162 interface messages (or standard) for SENC information at this time, the manufacturer must adequateley document the supplied EUT's interfaces. Clauses 4.7. a) and b) both give strong guidance on the prefered use of IEC 61162 series.

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13: US 3	4.7	b	General	Existing text should be deleted. Instead, individual equipment standards shall specify and list the minimum sentences that the equipment shall receive as a Listener and transmit (generate) as a Talker. Note that IEC Standard 61162-1 lists some of the appropriate sentences in the informative Annex A, Table A.1 and Table A.3. These tables are informative only, are not current for all devices, and may not exist in the next edition of 61162-1. Additional guidance on the determination of appropriate sentences may be sought from IEC TC80 WG6.	A listing of the minimum sentences should be developed and based upon IEC 61662-1 Annex A Table A.1 and A.3.	Not agreed See answer to 12 above
14: US 4	4.7	c	General	The list of minimum sentences developed in (b) above shall include the Approved Sentence Formatter and the single line title or description. There is no requirement to provide more detail, e.g. the sentence structure; this is available, together with all the essential definitions, in IEC 61162-1. Note that IEC Standard 61162-1 Table 5 contains the full list of all possible Sentence Formatters and their single line descriptions.	Text should be developed from IEC 61162-1 Table 5.	Not agreed See answer to 12 above
15: US 5	4.7	d	Editorial	Proprietary sentences, if used, need to be documented.	Add d) Any additional interface capability e.g. proprietary input or output sentences shall be tabulated as above, with full documentation.	Not agreed Clause 4.7 b) was re-agreed as the appropriate wording.
16: US 6	4.7	e	General	Any critical or unique interface characteristics, e.g. timing, resulting actions or equipment behaviours due to receiving or transmitting a sentence, which are additional to those specified in the IEC interface standard should be tabulated	No text is needed unless the conditions stated to the left apply.	Not agreed See answer to 15 above

National Committee	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
17: DE 5	4.8	2nd paragraph	Technical	Chart radar will be used often only in conjunction with a paper chart – these charts are often in other datum than WGS 84. In such a situation the position receiver will be forced to display and transmit the positions in a different geodetic datum. To ensure that the position can be recalculated to a usable WGS 84 automatic means may be provided by the receiver system. Otherwise the system should release an alarm and the chart information shall be removed from the display.	Change text as follows: The input from the position sensor and SENC shall have the same geodetic datum (WGS84). Otherwise automatic means may be provided to convert these data. If the chart radar cannot provide WGS 84 data for display purposes an alarm shall be released and the chart shall be removed from the display.	Not agreed. Reason - agreed by the comment resolution meeting: adequately covered
18: Japan.4	5.1		Editorial	The 'equipment under test' (EUT) shall ..	Remove quotation marks. The equipment under test (EUT) shall ..	Agreed
19: DE 6	5.4		General	IEC test-data-set covers only 18 nm in south – north direction, this will not be sufficient to test all ranges as proposed in 5.4.3. Another test area should be used for this purpose which covers an area up to 100 nm around own ships position with ENC data of different usages.	Select for test purposes an area which includes a coverage of following usages: a) harbour, b) approach and c) coastal. The usage general may be used in addition. The extension of the covered sea area should be at least 100 nm.	Not agreed If a manufacturer provides more than the minimum requirement of 12 NM, then a standard chart can be used as the test data set.
20: Japan.5	5.4.1.2	a)	Editorial	a) Switch the radar to TM ~~N up~~ and 3 nm range scale	**1 N UP**	Agreed
21: DE 7	5.4.1.2	c)	Technical	To cover the practical requirements on board of a ship the 20 targets should be replaced by those noted in table 1 with distances given there. (For table 1 see addition below.)	Exchange text of subparagraph c) as follows: Display and track the moving targets in table 1 in noted distances at sea. Track the maximum number of available targets or capacities of the tracking system, for this test the IEC Test Data set shall be used. The own ship should be placed within the harbour cells.	Not agreed The proposal was seen as too restrictive on Test Houses. The test house 'simulation' of 20 targets should be spread over a range and size as appropriate to the test arrangement.
22: DE 8	5.4.2		Editorial		Change reference from 4.3.1 to 4.3.2.	Agreed
23: Japan.6	5.5.3.3 and others		Editorial	0.25 nm, 1.0°	Change a full stop to a comma.	Agreed
24: DE 9	5.8		Technical	The interfacing is essential for modern equipment – a method how to test digital interfaces according to IEC 61162-1 is described in IEC 61162-1. To have a standardised method through all equipment this method should be used.	Extend text as follows: ...simulator as noted in IEC 61162-1 Annex C.	Agreed in principle See US 7 Below

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25: US 7	5.8	a) and b)	Editorial	IEC 61162 already includes necessary test provisions	Replace existing text in a) and b) with the following: "a) All interfaces that conform to IEC 61162 shall be tested in accordance with the relevant annex of IEC 61162, e.g. Annex C of IEC 61162-1." b) Any additional interfaces based on IEC 61162 standards shall be tested to the appropriate IEC 61162 standard. c) All other interfaces shall be tested in accordance with the documentation provided, but shall conform to the general principles of IEC 61162.	Agreed See 24 above Agreed Agreed in principle .....documentation provided by the manufacturer. (delete the rest of the proposed sentence)
26: US 8	5.8		Editorial	See 4.7 e) above. Any critical or unique interface characteristics, e.g. timing, resulting actions or equipment behaviours due to receipt or transmission of a sentence, shall be identified and include a detailed test method for each critical interface characteristic.	No text is needed unless the conditions stated to the left apply.	Not applicable See answer to 16 above
27: DE 10	5.9		Technical	The test should be modified for changed paragraph 4.8.	Extend second paragraph as follows "..alarmed and that the chart is switched off if no WGS84 position is available.	Not agreed. The comment resolution meeting agreed to the reason – adequately covered.
28: Finland 1	Annex A	Table A1	Technical or editorial	The table contains 4 pieces of referencies to paragraph A.1.3. However the Annex A do not contain the paragraph A.1.3	Workgroup shall change the reference to an existing paragraph or workgroup shall include the text of the paragraph A.1.3 into the document.	Agreed in principle. Insert the missing Clause number and title „A.1.2 Size „ In front of the paragraph immediately under the table A1 starting ‚The size column . . .
29: DE 11	Annex C		Editorial	References for Annex C according to the latest version of IEC 61174 are to be added.		Agreed See Table X below
30: Japan.7	Annex A	Table A1	Editorial	Table A1 Specification	Move the title of Table A1 from below the Table to above the Table.	Agreed
31: Japan.8	Annex B	d)	Editorial	Apply simulated positional (~~GPS~~) and gyro-compass information.	**2 GNSS**	Agreed
32: France 3		3.1.2 and Annex C.2	Technical	The cartographic database used by the radar should have a specific name, different from SENC, and used each time wording like « SENC information » or « SENC data » is in the present text.		Not agreed This IEC test standard is a clarification of the IMO Performance Standard that references ‚selected parts of the SENC'.

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33: US 9	Informative annex		General	It is recommended that additional informative annexes illustrating unique interface characteristic behaviours be included with the IEC Test Standard. One example would be that any unique relationships between sentences and how the device behaves with regard to that relationship are provided. In IEC 61993-2, a relationship is established between the ALR and TXT sentences. Specific information is provided as to when an ALR sentence should be generated and how the TXT sentence is used to link additional information with a specific ALaRm sentence. Another example might be when associating the relationship of internal processes, data, or actions, with specific sentences and or fields within the sentences. See IEC 61993-2 Table 8 and Table 9 for examples of this type of informative information.	Provided only as needed.	Not agreed No specific proposal has been made to support the comment.

Table X Insertions to be made at the end of all clauses in C.1 and C.2 of Annex C in place of [(4.4/x.x)] etc.

Number	Delete	Insert
1	C.1 [(4.4/x.x)]	 Initial data test (6.5) Display-show and verify (6.8.15.2)
2	[(4.4/y.y)]	Automatic updates (6.8.15)
3	[(4.4/z.z)]	Automatic updates (6.8.15)
4	[(4.4.7/a.a)]	Record and logs (6.8.15.3)
5	[(5.10.1.1/h.h)]	Display – show and verify (6.8.15.2d)
6	[(5.10.1.4/i.i)]	Receipt – installation and application (6.8.15.1 d), e) and f))
7	C.2 [(5.1, 6.8.15.1/b.b)]	Loading corrupted data (6.8.14) Initial test (6.5) Automatic update (6.8.15)
8	[(5.1/c.c)]	Automatic update (6.8.15) Receipt – installation and application (6.8.15.1)
9	[(6.6/d.d)]	Accuracy (6.6)
10	[(6.6/e.e)]	Accuracy (4.11.1, 4.12.1, 5.1, 5.4.4 and 6.6)
11	[(6.6, 6.8.15.1/f.f)]	ENC (4.4.1, 4.4.2, 5.5.2 and 6.5.2)

The following are further comments that the comment resolution meeting unanimously (no disagreement) wished could be considered as editorial findings.

1. Insert in 5.5.3.2 a **clause " c) Check by observation that manual adjustment of SENC information is available, that an indication is given and that resetting is simple".** Reason: missing test to a previously agreed required.

2. Insert in last sentence of fourth paragraph in 4.3.5 - Full details **"and relevant safety cautions,"** shall . . . . Reason: clarity of requirement.

3. Insert in Table A1 Wherever (fill) is used in column 1 to insert instead **"(area fill)".** Reason: clarity of requirement**.**

4. Insert in clause 4.4.5 b) a new sentence at the end. **" An alternative 'position information' source, such as LORAN-C, DR etc., may be provided together with a clear indication".**

   Reason: To clarify the alternative arrangement of use of say LORAN-C or other means.